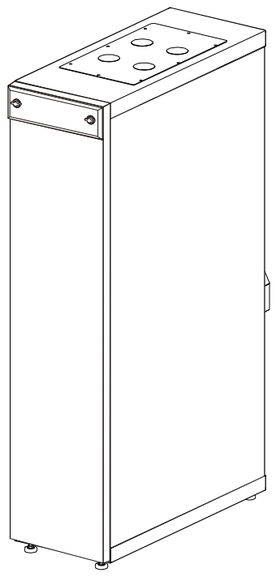
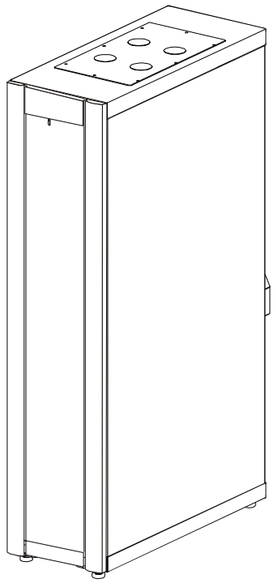
Installation

MGE™ Galaxy™ 3500 and Smart-UPS™ VT Maintenance Bypass Panel, Distribution and Transformer Enclosures



MGE™ Galaxy™ 3500



Smart-UPS™ VT

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

Warning: ALL safety instructions in the Safety Sheet (990-2940) must be read, understood and followed when installing the UPS system. Failure to do so could result in equipment damage, serious injury, or death.

Caution: All electrical power and power control wiring must be installed by a qualified electrician, and must comply with local and national regulations for maximum power rating.

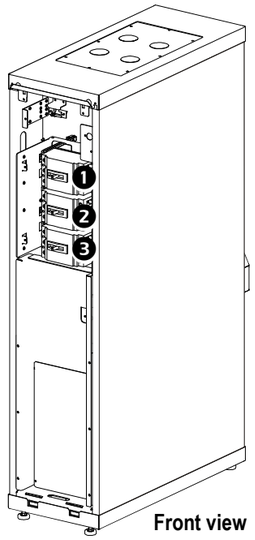
Caution: Operation and Maintenance must only be performed by qualified personnel.

990-3605B-001

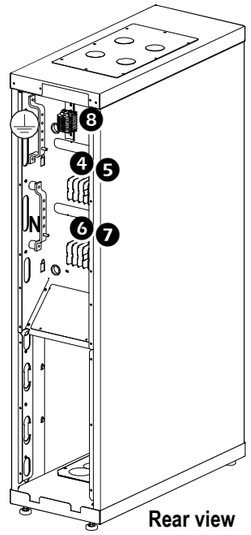
3/2011

Product Overview

Maintenance Bypass Panel (MBP)



Front view



Rear view

❶ Q1 input breaker

❷ Q3 maintenance bypass breaker. A Philips screwdriver is required to unlock Q3

❸ Q2 output breaker

❹ Mains input

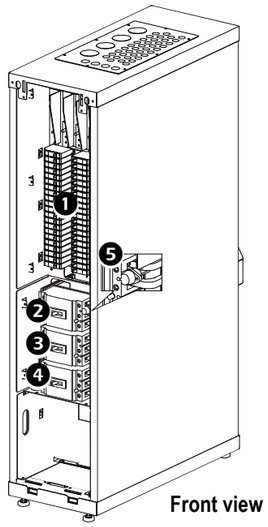
❺ Critical load

❻ UPS output

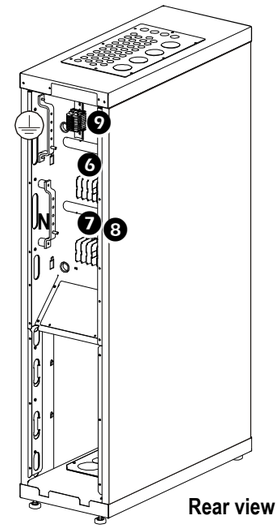
❼ UPS input

❽ Control terminal block

MBP with Distribution



Front view



Rear view

❶ Distribution panel

❷ Q1 input breaker

❸ Q3 maintenance bypass breaker. A Philips screwdriver is required to unlock Q3

❹ Q2 output breaker

❺ Control fuse

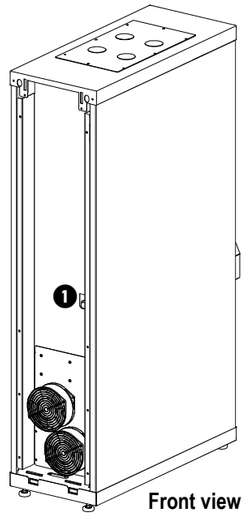
❻ Mains input

❼ UPS output

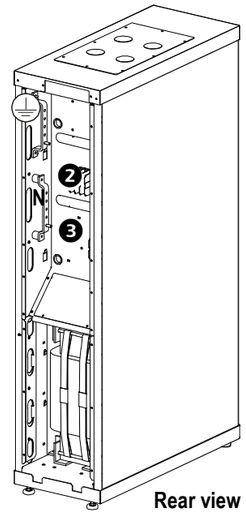
❽ UPS input

❾ Control terminal block

Transformer



Front view



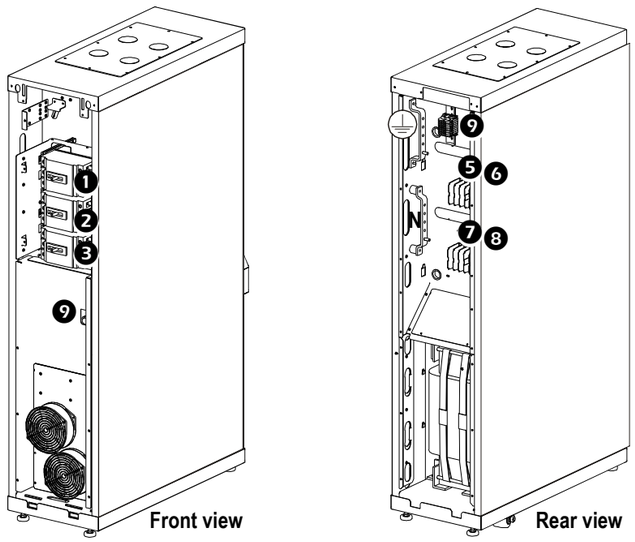
Rear view

❶ Control fuse

❷ Mains input

❸ UPS input

Transformer with MBP



❶ Q1 input breaker

❷ Q3 maintenance bypass breaker

❸ Q2 output breaker

❹ Mains input

❺ Control fuse

❻ Critical load

❼ UPS output

❽ UPS input

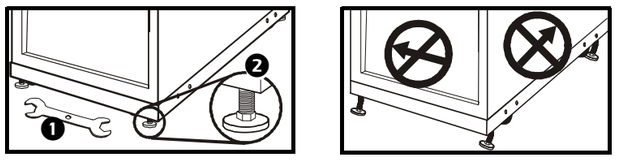
❾ Control terminal block

Site Planning

Note: Refer to the UPS Receiving and Unpacking sheet (990-2940 for MGE Galaxy 3500 and 990-1747 for Smart-UPS VT) to determine the space requirements for the MBP. Consult local codes for any additional requirements. Ideally, install the MBP in a location close to the UPS.

Level the Enclosure

Warning: The system must be installed on a level floor. The leveling feet will stabilize the enclosure, but will not account for a badly sloped floor.



❶ Use a 13/14 mm wrench to adjust the four leveling feet.

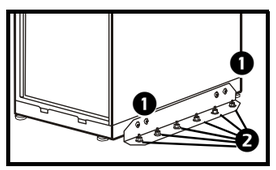
❷ Ensure that the system is level.

Caution: Do not move the enclosure after the leveling feet have been lowered.

Floor Anchoring (if applicable)

Anchor the enclosure to the floor

Note: Floor-anchoring bolts are not provided with the unit. Purchase the bolts locally (minimum size: M8). Follow the specifications given by the manufacturer when bolting the UPS system to the floor.



❶ Reuse the two transport brackets (one on each side) that were used to secure the unit to the pallet during transport.

❷ Drill two to six holes in the floor for each bracket. Attach with bolts.

For seismic applications, see the APC website for seismic requirements.

Prepare for Cables

Note: All external cable connections with the UPS and mains must be made on-site. External cables are not supplied with the shipment.

Note: All control wire connections between the UPS and the MBP must be made on-site. Control wires for Q3 auxiliary are supplied with the shipment.

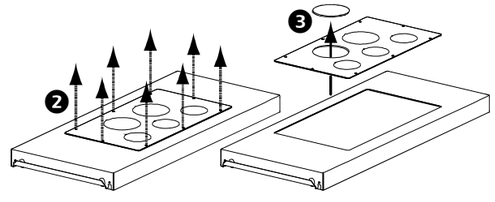
Note: Internal cable connections for adjacent cabinet configurations are supplied with the auxiliary cabinet.

Create knockouts for cable access

❶Remove the front panel.

❷Remove the top or bottom cover.

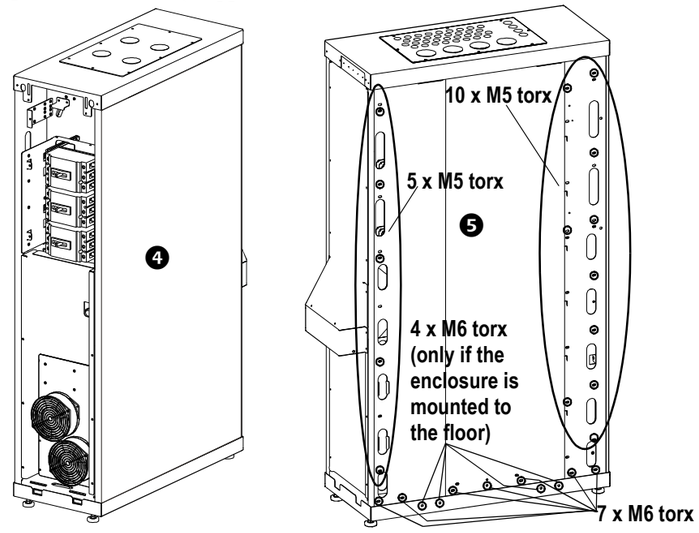
❸Use a knockout punch to create appropriate-sized holes for the cables/conduits in either the top or bottom cover of the enclosure.



❹Remove the right side panel.

❺Remove the right inner panel.

❻Install conduits (if applicable) and re-install all the covers.



Run the Cables

Cable entry through I/O box

Note: Bottom cable entry is not applicable to enclosures with transformers.

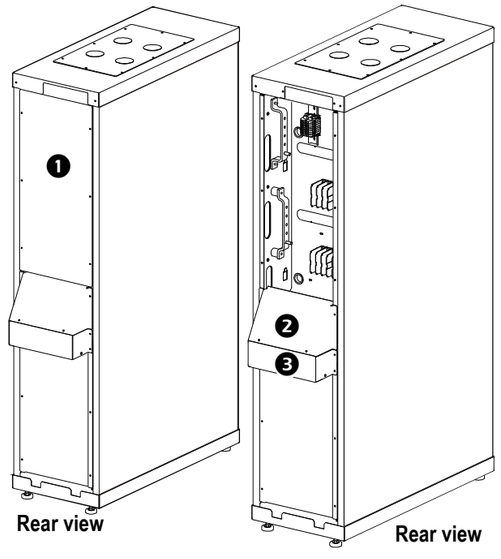
❶Remove the upper rear cover.

❷Remove the top cover of the I/O box.

❸Remove the bottom cover of the I/O box (this one will not be reinstalled).

❹Route the cables through the I/O box to the cable connection area.

❺Re-install the top cover of the I/O box.

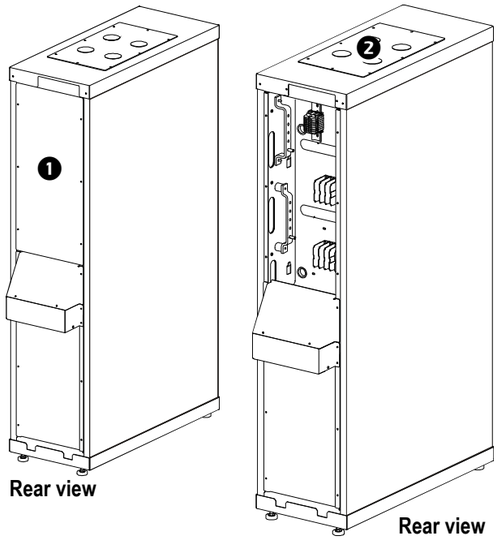


Top cable entry

❶Remove the upper rear cover.

❷Run the cables through the top cover to the cable connection area.

❸Re-install the upper rear cover.



Bottom cable entry

❶Remove the upper rear cover.

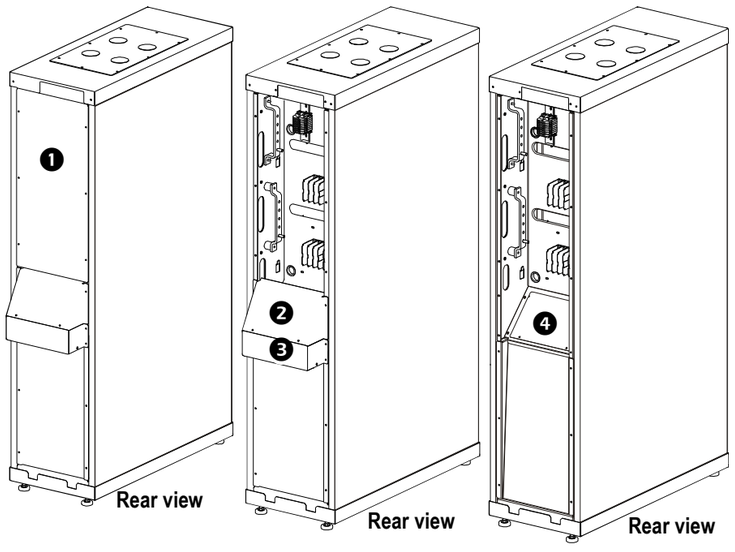
❷Remove the top cover of the I/O box.

❸Remove the bottom cover of the I/O box.

❹Remove the plate which blocks the cable access from the bottom.

❺Route the cables through the bottom to the cable connection area.

❻Re-install the I/O box.



Connect Power Cables

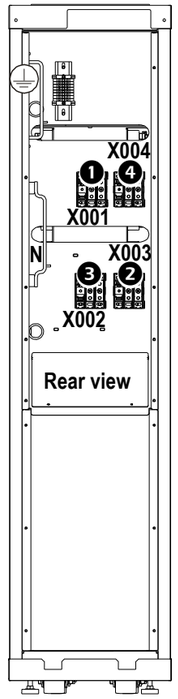
MBP

❶Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.

❷Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.

❸Connect the UPS output cables (L1, L2, L3, N, G) from the UPS output terminals (X002), and the ground and neutral busbars.

❹Connect the critical load (L1, L2, L3, N, G) to the load terminals (X004), and the ground and neutral busbars.

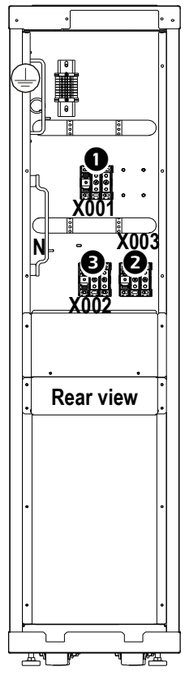


MBP with Distribution

❶Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.

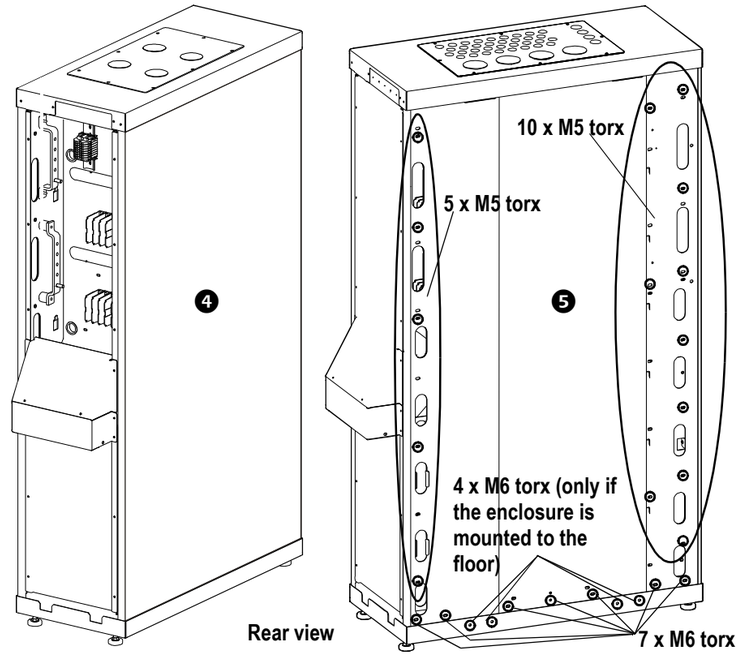
❷Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.

❸Connect the UPS output cables (L1, L2, L3, N, G) from the UPS output terminals (X002), and the ground and neutral busbars.



❹Remove the right side panel (seen from the rear).

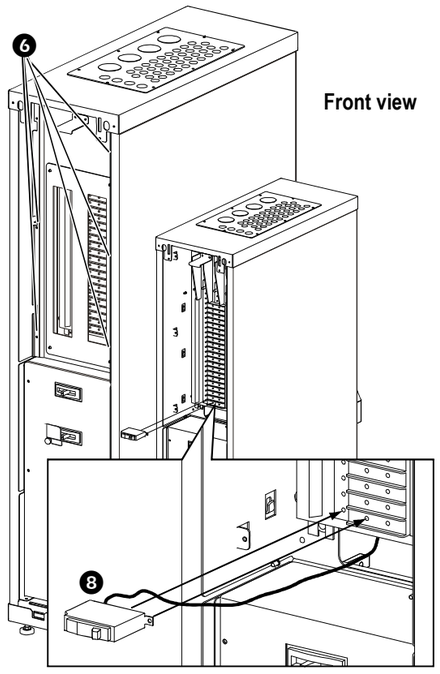
❺Remove the highlitet screws and remove the right inner cover (seen from the rear).



❻Loosen the six screws and remove the inner cover.

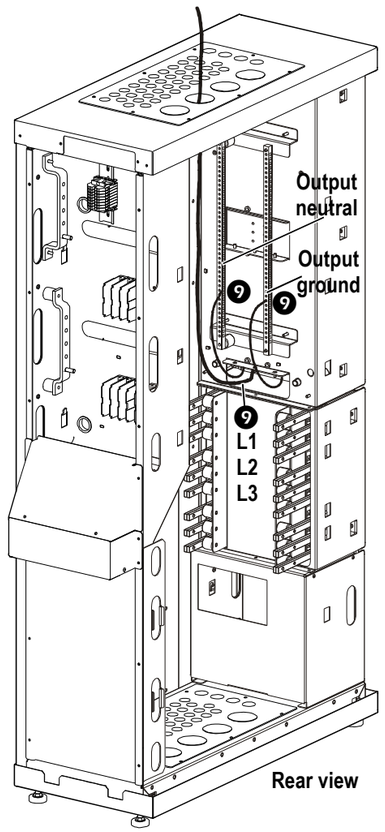
❼Connect the L1, L2, L3, N, G cables from the critical load to the required distribution modules.

❽Connect the distribution modules to the distribution panel and route the cables through the routing window just below the distribution panel.



❾Connect N and G to the busbars and run L1, L2, L3, through the top or bottom.

❿Re-install all covers.

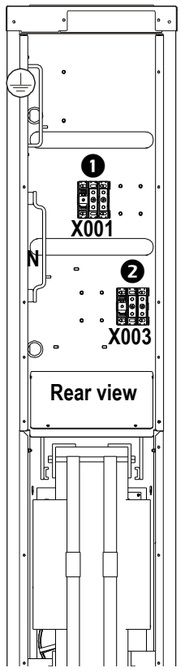


Transformer

❶Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.

❷Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.

❸Reinstall the top cover of the I/O box.



Transformer with MBP

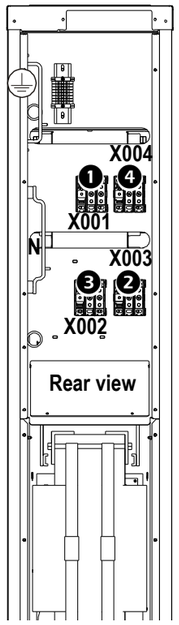
❶Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.

❷Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.

❸Connect the UPS output cables (L1, L2, L3, N, G) from the UPS output terminals (X002), and the ground and neutral busbars.

❹Connect the critical load (L1, L2, L3, N, G) to the load terminals (X004), and the ground and neutral busbars.

❺Reinstall the top cover of the I/O box.



Connect the Communication Cables

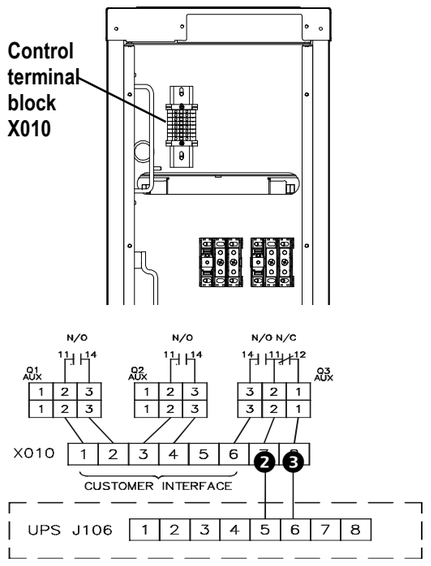
Note: Control wires for Q3 auxiliary are supplied with the shipment.

Note: The transformer has no communication wiring.

❶Route the communication cables through the top, bottom, or I/O box.

❷Connect the wires between the UPS (J106 port 5) from the MBP (X010 port 7 on the control terminal block).

❸Connect the wires between the UPS (J106 port 6) from the MBP (X010 port 8 on the control terminal block).



Specifications

Electrical for SBP10K15F and SBP20K30F

Electrical	10-15 kVA	20-30 kVA
Nom. input voltage	208 V 4W+GND	208 V 4W+GND
Nom. output voltage	208 V 4W+GND	208 V 4W+GND
Circuit breaker rating	60 A	125 A
Wiring (only use copper conductors suitable for at least 75°C)		
Maximum cable size	70 mm² (2/0 AWG)	70 mm² (2/0 AWG)
System output/ UPS output cable	25 mm² (4 AWG)	50 mm² (1 AWG)
System input/UPS input cable	25 mm² (4 AWG)	50 mm² (1 AWG)

Electrical for SBP10K30F-DP, SBPXFM10K30F, and XFM10K30F

Electrical	10-30 kVA
Nom. input voltage	208 V 4W+GND
Nom. output voltage	208 V 4W+GND
Circuit breaker rating	125 A
Wiring (only use copper conductors suitable for at least 75°C)	
Maximum cable size	70 mm² (2/0 AWG)
System output/ UPS output cable	50 mm² (1 AWG)
System input/UPS input cable	50 mm² (1 AWG)

Electrical for SBPXFM10K30G and XFM10K30G

Electrical	10-30 kVA
Nom. input voltage	480 V 3W+GND
Nom. output voltage	208 V 4W+GND
Circuit breaker rating	50 A
Wiring (only use copper conductors suitable for at least 75°C)	
Maximum cable size	70 mm² (2/0 AWG)
System output/ UPS output cable	50 mm² (1 AWG)
System input/UPS input cable	13 mm² (6 AWG)/50 mm² (1 AWG)

Physical

Enclosure	Shipping Weights	Weights	Height	Width	Depth
MBP	156 kg (344 lbs)	122 kg (268 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)
MBP with Distribution	189 kg (416 lbs)	154 kg (340 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)
Transformer	314 kg (692 lbs)	279 kg (616 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)
Transformer with MBP	365 kg (804 lbs)	330 kg (728 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)

Environmental

Environmental	
Operating environment	Indoor use only, protect from water and conductive contaminates
Operating temperature	0° to 40°C (32° to 104°F)
Humidity	0 to 95%, non-condensing

Torque value

Torque value	
Terminal blocks	6.89 Nm (61 lbs in)
Busbars M6	11.3 Nm (100 lbs in)

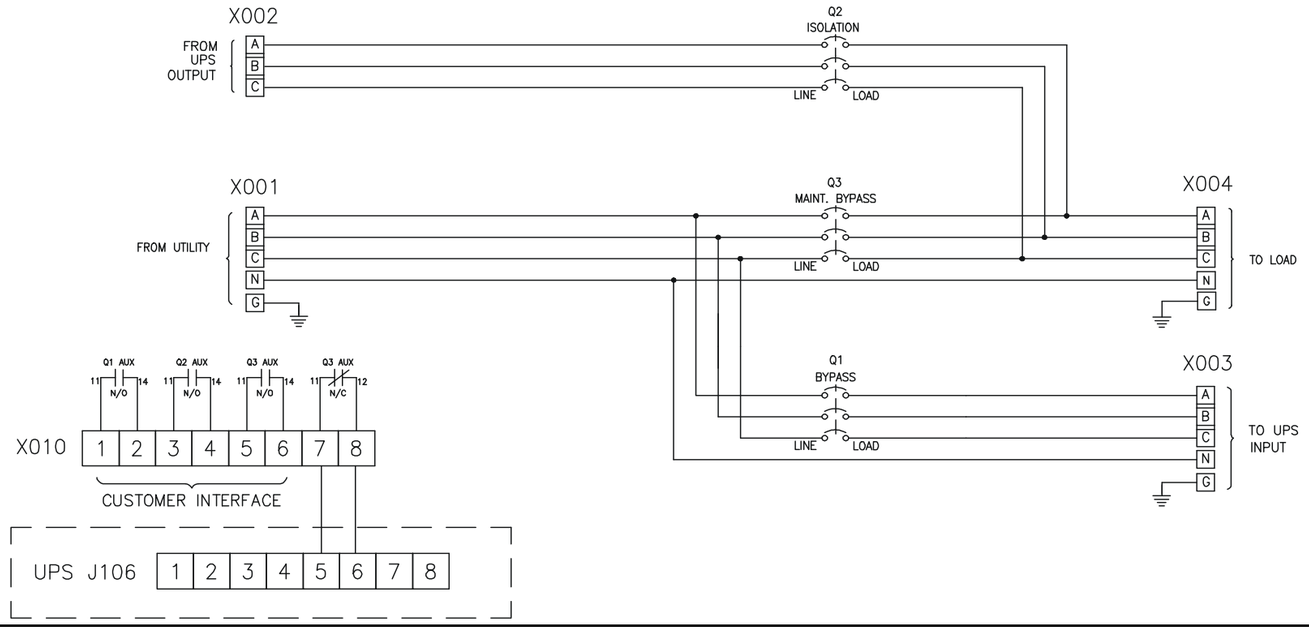
Contact Information

For local, country-specific centers: go to www.apc.com/support/contact.

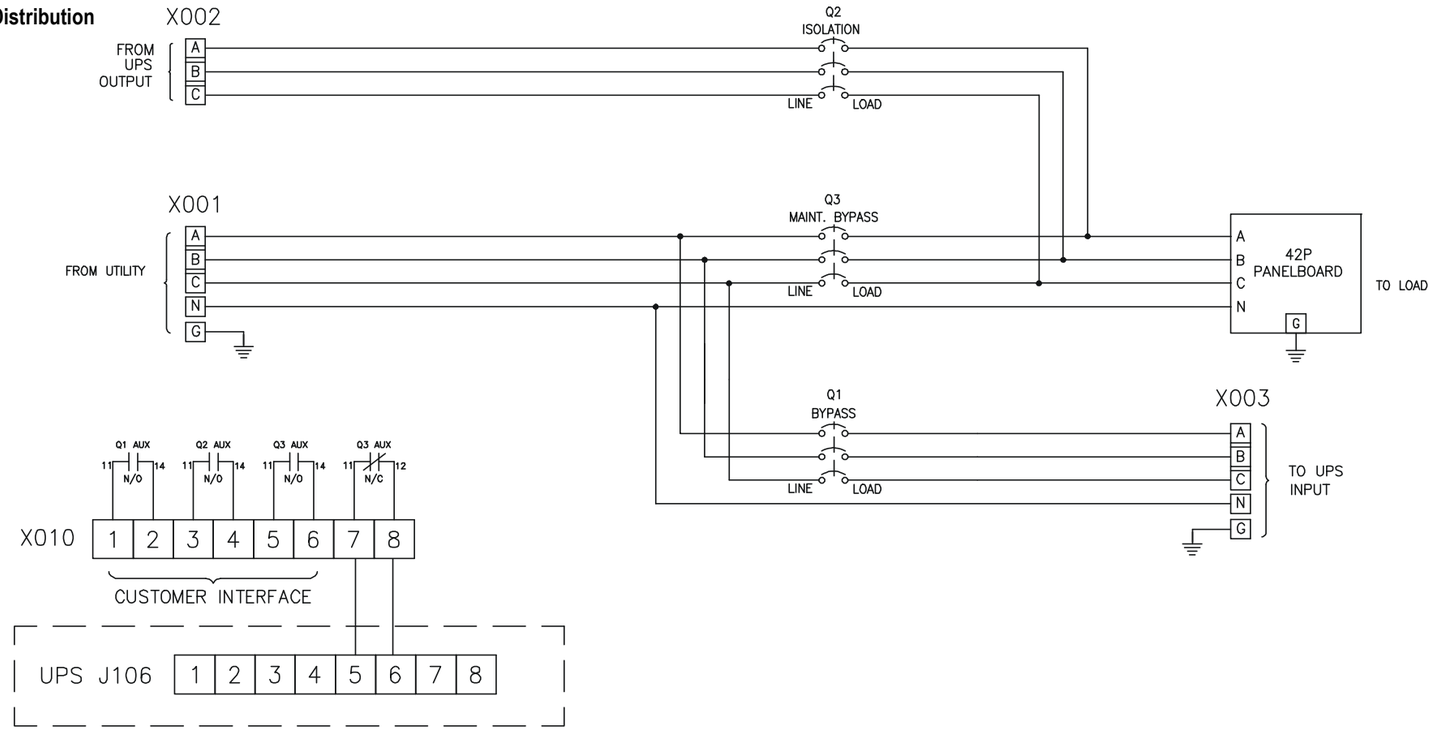
Appendix

Diagram

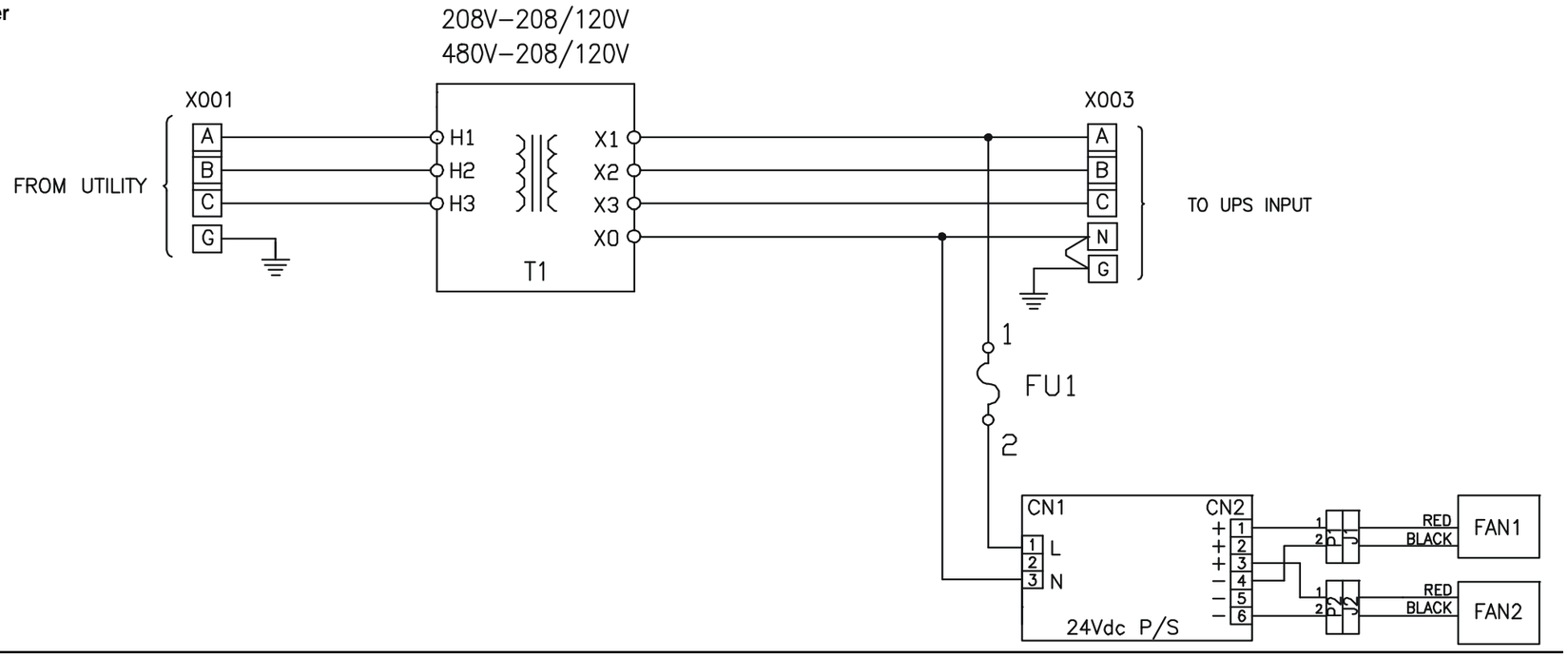
MBP



MBP with Distribution



Transformer



Transformer with MBP